

# Wallum rocketfrog

## *Litoria freycineti*

Vulnerable (*Nature Conservation Act 1992*) | Ecological Sciences, Queensland Herbarium

### Identification

Medium-sized, slender bodied terrestrial frog with a protruding snout and very long hindlimbs.

Snout-vent length (SVL) is 34-39 mm for males and 39-42 mm for females (Meyer et al. 2006; Meyer 2012).

The dorsum is usually light brown with irregular dark blotches and a pale triangular patch on the snout, often with a dark marking in the centre. A dark lateral stripe, bordered below by a pale glandular stripe, extends from the snout, through the eye and to the base of the forearm (almost uninterrupted apart from a pale streak in front of the eye). Edges of the jaws are brown with pale blotches.

Ventral surface colouration is cream or white and coarsely granular, with the throat darkly pigmented with a pale yellow wash in males. The dorsum has numerous low warts and short skin folds, roughly aligned in longitudinal rows. The posterior thigh is brown with large cream or fawn spots. Toe and finger discs are small with the toes partially webbed and the fingers unwebbed (Barker et al. 1995; Cogger 2000; Meyer et al. 2006).

*Litoria freycineti* may be confused with striped rocketfrog *L. nasuta*. The two species may be distinguished by the texture of the dorsum; narrow, longitudinal skin folds in *L. nasuta* and rows of low warts in *L. freycineti*. The pale triangular patch on the snout in *L. freycineti*, can also be a distinguishing feature (Barker et al. 1995; Cogger 2000).

### Tadpoles

Total length is up to 53 mm. Deep-bodied and dorsum colouration is dark grey-brown, often with irregular darker markings. Snout is rounded with an even angle from snout to eyes in profile, and eyes are positioned dorsolaterally. The lower half of the venter is opaque white with a copper-pink sheen.

The moderately high tail fins and musculature are both uniform brown in colour (Anstis 2002; Meyer et al. 2006).

### Call

Similar to the call of *L. nasuta*, described as rapid duck-like quacking or yapping which can sometimes be irregular (Barker et al. 1995).

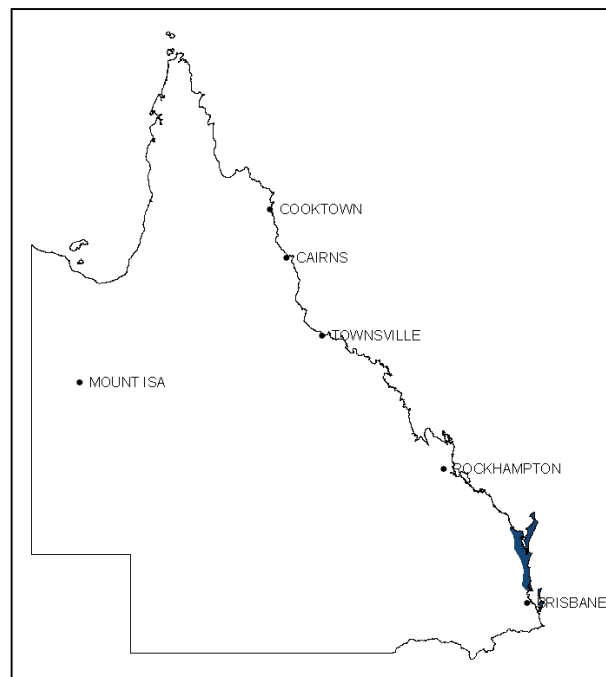


## Distribution

Confined to the coastal lowlands and sand islands of south-east Queensland and New South Wales. Occurs from Fraser Island south to Jervis Bay. In Queensland, significant populations of *L. freycineti* are known from Great Sandy National Park, Moreton Island, Bribie Island and North Stradbroke Island (Hines et al. 1999; Hines et al. 2004; Meyer et al. 2006).

## Habitat

Inhabits coastal wet heath where it can be found around sedge swamps, freshwater lakes and drainage lines on low nutrient soils. Animals have been recorded a considerable distance from water in eucalypt forest near wet heath habitat (Hines et al. 2004; Meyer et al. 2006; Meyer 2012).



## Seasonal and timing considerations

The optimal conditions to survey for *L. freycineti* are during the breeding season (i.e. spring and summer months) after rainfall. To increase likelihood of detecting the species, surveys should avoid cold and/or extended dry periods.

Surveys can also be undertaken up to two months after the survey area has been inundated with water. This is the period when juveniles are most likely to be in abundance and more detectable (H. Hines pers. comm. 2012).

## Recommended survey approach

As it can be difficult to differentiate the calls between *L. freycineti* and *L. nasuta*, it is recommended that observers prioritise survey techniques, where possible, or use a combination of the following survey techniques. During the optimal conditions, survey techniques involving visual surveys should be the highest priority, through to trapping being the lowest priority, as indicated by the following headings:

### Nocturnal vehicle transect

Nocturnal vehicle transects should be conducted on roads and well maintained tracks with limited vegetation and debris, and on warm humid nights where roads/tracks bisect suitable breeding habitat. Transects should be repeated multiple times over the same section(s) of road, where possible.

Drive at a constant speed (~10 km/hr) with the driver and front passenger scanning the road for any animals crossing. When an animal is detected stop the vehicle and identify the species.

Transect width, visibility (e.g. rain, road conditions), constant speed and time taken to drive the transect should be recorded (see datasheet for further variables, Eyre et al. 2012).

### Thorough visual survey

This survey technique involves observer/s walking through suitable wallum habitat along a track or roadside (if possible) systematically searching and listening (calling adult males) for frogs and tadpoles. The aim is to detect adult frogs by their eyeshine. Length of transect, weather conditions and time spent conducting the

survey should be recorded. Any individuals that are detected aurally should be visually confirmed due to the call of the species being very similar to that of *L. nasuta*. Thorough searches targeting adult *L. freycineti* should focus on wet ground near water and around sedges where males are calling (Meyer et al. 2006).

Tadpoles may be found in water bodies which contain the shelter sites mentioned above. The most effective way to capture tadpoles is with a dip net. For identification purposes, tadpoles can be held in a sealable plastic bag filled with water from where it was captured (Meyer et al. 2001).

\*Note: tadpoles can be very difficult to identify to species-level and usually require highly specialised skills for positive identification, or housing tadpoles for a period of time to allow them to metamorphose into adult frogs, under the appropriate state government permits.

## Survey effort guide

Although there is currently no information on detection rates for *L. freycineti*, the recommended effort below, when implemented in appropriate habitat, weather conditions and season(s), should provide a high likelihood of detecting *L. freycineti*. If suitable habitat is limited within the project area, transects should be repeated multiple times over the same section(s) of breeding habitat.

Minimum effort within suitable breeding habitat during optimal conditions			
Survey technique	Effort per survey period	Effort per survey	Number of survey periods
Nocturnal vehicle transect	~10 km (or all suitable roads surveyed 3 times)	Spread over 2 or more nights	3 surveys
Thorough visual survey	300 m per 1000 m of water body perimeter or total of 900 m if < 1000 m present; at least 30 minutes per 100 m	Spread over 2 or more nights	3 surveys

## Ethical and handling considerations

- Minimise habitat disturbance at breeding sites. If transects are established in wet wallum habitat, care should be taken not to deviate from transects at any time.
- Avoid chemical contact with the environment and animals while handling (e.g. insect repellent).
- Strict hygiene protocols should be implemented to minimise disease and pathogen (e.g. chytrid fungus) spread (for further information see [www.ehp.qld.gov.au](http://www.ehp.qld.gov.au)).
- Avoid prolonged exposure of animals to the spotlight beam. For longer observation periods, dim the light or use an infrared beam or a red filter.
- Handling of individuals should be avoided as it may affect their behaviour and/or health, but if necessary, appropriate handling methods for examination should be used (i.e. holding frogs by their back legs).
- Any captured animals should be released at the site of capture as soon as possible after identification.

## Acknowledgements

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## Citation

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## Key references

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